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ABSTRACT

Project Exploration developed and pilot-tested a process for the career development of 21 learning-disabled (LD) women on the Fayetteville campus of the University of Arkansas. The project focused on enlightened self-awareness as well as the development of essential academic and behavioral skills. The project helped the LD women to gain knowledge of their strengths and weaknesses, develop strategies for accommodating learning differences and performance difficulties, gain knowledge about the world of work and the demands of specific careers, establish realistic goals for career growth, and develop skills for obtaining and retaining jobs. This report describes the theoretical foundation of the project and its methodology. Appendices contain assessment materials, a list of media resources for LD adults and adolescents, a checklist on planning events for LD adults, and guidelines for using audiotaped texts with LD students. A 69-item bibliography concludes the report. (JDD)

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Project Exploration

Search for Self

Project Director
Suzanne E. Gordon

Authors
Charlotte F. Johnson
Adelaide A. Stepp

University of Arkansas
Fayetteville, Arkansas

Women's Educational Equity Act Program
U.S. Department of Education
William Bennett, Secretary

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Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

—Robert Frost

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Acknowledgments

The program director for this project was Charlotte Johnson. Johnson has been involved in concerns for the learning disabled since 1978, when she developed the first self-help group in her community. Her involvement with the LD population has, however, gone far beyond her own community work. From 1978 to the present she has served as the liaison-contact person between a network of LD people and the Association of Children and Adults with Learning Disabilities (ACLD); she was vice-president of that organization's National Youth and Adult section in 1980. Her career experience has included serving as LD Resource Teacher in the public school Learning Lab in Fort Smith, Arkansas, and as LD Specialist in the Learning Resources Lab of the Student Development Center at the University of Arkansas, Fayetteville campus.

In addition to her valuable organizational and career experience, Johnson is widely read in the field of learning disabilities. She has published articles on the LD population, with subjects ranging from the emotional and physical aspects of the handicap to ways of providing better mental health programs for this disadvantaged group. For the past several years Johnson has been a presenter at the state and national ACLD conventions.

Herself an LD woman, Johnson has made valuable contributions to this program by serving as an excellent role model to the other LD women in the project. Possessing a unique empathy for the plight of these women, she provided a constant reminder that LD women can overcome barriers to participation in the careers that those without handicaps take for granted. On a more technical level, she shared her own coping strategies, which taught the program participants new methods for coping with difficulties.

The project's career counselor was Katherine Micken, a graduate student in counselor education. Micken's experience includes the positions of Coordinator of Women's Programs, Orientation Assistant, Learning Skills Instructor, and, most recently, Academic Probation Advisor and Special Services Outreach Counselor within the Student Development Center at the University of Arkansas. She is certified to facilitate the Human Potential Seminar (HPS) and has led HPS groups within Special Services and the Minority Engineering student program. In addition, she led a career/life-planning workshop for the University of Arkansas chapter of the National Student Speech-Language-Hearing Association in the spring of 1983. Micken was involved in the research and program planning of this project and contributed much to the counseling and individual contact components. Since 1981 she has been involved in women's programs at the University of Arkansas, and she has worked with both minority women and specific women's interest groups. She recognizes the need for promoting educational and career equity for all women.

An important element in the success of Project Exploration was the active involvement and support of its voluntary advisory committee, which included the following people: Dr. Suzanne Gordon, Dean of Students and Project Director; Jane Guyton, Director of the Women's Resource Center; Dr. Paul Harris, Director of the Student Development Center; Jim Hemauer, Coordinator of the Disabled Students Program; Dr. Karen Hodges, Learning Lab Coordinator; Charlotte Johnson, Program Director; Kathy Mandrell, Lab Instructor in the Learning Resources Unit; Dr. Peggy Peterson, Special Services Director; Peggy Smith, Diagnostician in the Learning Resources Unit; and Willa Williams, Career Advisor for Career Planning and Placement.

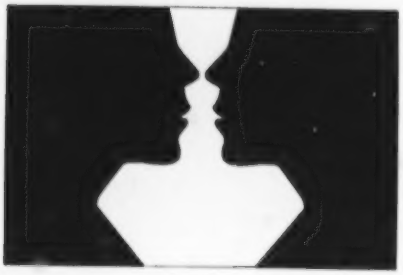
The advisory committee for Project Exploration was extremely dedicated and helpful to the project as a whole.

Its members represented staff from the Student Development Center, Career Planning and Placement, and the Dean of Students' Office. In all, these people spent over 200 hours in a variety of capacities that included the following services: counseling assistance with test anxiety, help with English classes and comprehension of main ideas when reading or writing, assessment of relationships, academic mentoring, budgetary meetings, and general counseling sessions with project participants.

The entirely voluntary advisory committee played an important role in the success of Project Exploration. Any future replication should include a similar committee.

Adelaide Stepp, the compiler and editor of the Project Exploration performance report and handbook, was not directly involved in the project until May 1984, when she was hired to serve in those capacities. She had, however, collaborated with the program director, Charlotte Johnson, on several occasions in preparing grant proposals for programs for the LD population. Stepp's background includes fourteen years as an English teacher at the secondary and postsecondary levels and twelve hours of course work in learning disabilities. She holds a doctorate in higher education from the University of Arkansas, Fayetteville.

Introduction



Description of Project Exploration

Project Exploration developed and pilot- tested a comprehensive process for the career development of learning-disabled (LD) women. Although the project involved a small number of students (twenty-one women), the process is applicable for LD women in any high school or college setting. The process can also be adapted for other disabled women, particularly those with "invisible handicaps."

The LD female is a victim of double discrimination, based on bias both against her disability and against her sex. Accordingly, a program specific to career orientation for the LD woman was developed and submitted for funding to the Women's Educational Equity Act Program of the U.S. Department of Education. The program focused on assisting women in adapting to their learning differences and adjusting to a typically male-oriented society and world of work. The project involved LD women on the Fayetteville campus of the University of Arkansas.

Since the target population for this program was composed of LD women who had already overcome the hardships of competing with nonhandicapped peers at the secondary school level and had taken the initiative to continue their education, the prospect of success was considered quite good.

The project dealt with the emotional as well as mental disabilities of participants. LD women are particularly susceptible to discrimination because of two contrasting perceptions of themselves. They often suffer from a severe lack of self-knowledge, particularly of their strengths and weaknesses (Brown 1980). This problem of self-perception can manifest itself in different ways. As is true of many women, whether learning disabled or not, the LD woman is even more apt to externalize the locus of control of her life. She tends to base her self-awareness on what others say about her (Blalock 1981). This fact often leads to an introverted, "loner" personality, which is a further handicap in both the classroom and the job search. Frequently, a type of "rescue syndrome" develops; the LD woman, who has externalized her perceptions, begins to look for an external relief from her situation, someone to rescue her from the need to cope with unpleasant environments. This behavior then leads to a further diminishing of assertiveness skills, another handicap in pursuing career opportunities.

While some LD women allow their self-perceptions to make them less assertive, others tend to concentrate on their strengths rather than their weaknesses. Though this focus can be a positive factor in the development of assertiveness skills, it can also be as emotionally dangerous as the rescue syndrome. This unrealistic self-perception can lead to inflated goals, and consequently, disillusionment about realistic expectations for both educational and career objectives. This overexpectation can lead to a "failure syndrome." In order to break this chain of failure, it is necessary to encourage the motivation and assertiveness that lead to high expectations and channel the energy into more realistic goals and objectives. It is equally important to neither overestimate nor underestimate abilities.

These emotional disabilities are irretrievably linked to the person's mental disabilities. The cognitive style of the learning disabled is characterized by neurological disorganization that manifests itself in a form of dyslogica, an inappropriate logic function that blocks the ability to cope or choose an appropriate strategy to accomplish a task effectively. The lack of awareness of this cognitive dimen-

sion causes much miscomprehension about both LD people and the efforts of the helping professions.

Although definite grouping is difficult in any population, the LD population tends to fall into three major categories:

1. *Pure hyperkinetic type.* The members of this group are characterized by hyperactivity, attentional deficits, distractibility, impulsiveness, and disorganized behavior. Though they have academic skill deficits, those deficits are mild and secondary to the five symptoms first cited. Their verbal I.Q. scores are generally higher than the performance I.Q. scores.
2. *Pure learning disability.* This group is characterized by a severe reading disability and developmental dysorthographica. The members of this group exhibit some left/right brain confusion; have language-processing deficits, both receptive and expressive; and can be slow moving and talking. However, they generally have good motor coordination, possess high mechanical skills, and score better on the performance section of I.Q. tests than on the verbal section.
3. *Mixed types.* This is by far the largest of the subgroups. Individuals in this group exhibit a varying combination of symptoms from both the behavioral and the cognitive/language-processing areas of deficit. These symptoms, however, are not usually to the degree of severity of the two "pure" types. This is the most difficult group to work with.

In light of the wide variety of symptoms associated with the learning disabled and the vocational implications of the various symptoms, there is a great deal of importance placed on assessment and individualized learning strategies within this population.

Objectives and Strategies of Project Exploration

The overall goal for the project was to develop a comprehensive process of career development for LD women, focusing on enlightened self-awareness as well as the development of essential academic and behavioral skills.

Objective 1

The first objective was to identify twenty LD women and provide a thorough assessment of their academic and personal skills.

Strategy

The project worked in conjunction with both the Admissions Office of the University of Arkansas and the Disabled Students Office. It was found that by using ACT scores of incoming college freshmen, a prediction could be made of a learning disability. Subjects of one study whose composite ACT scores fell below 8 were determined, with 84 percent accuracy, to have a SPECIFIC LEARNING DISABILITY* (Knowles 1980). Some of the present members of the LD population had already been identified through the Disabled Students Office and through the Learning Resources Unit in the Student Development Center.

Other contacts were made by telephone to the major LD experts in the state. The program director had the primary responsibility for this aspect of recruiting through the contacts she had already made across the state. For those who were not identified through the institutional means described above, a series of ten advertisements was placed in the *Arkansas Traveler*, the university newspaper, beginning with the August 1983 issues and continuing through the beginning of September 1983. In addition, posters advertising the program were placed in the residence halls, in the student union, and in other buildings where there was a high traffic of several student populations.

A special effort was made to identify minority LD women students through contacts with minority student associations and residence hall staff.

Based on the already-identified LD population and projected new enrollment, twenty-one LD women students participated in the pilot program. A thorough diagnosis of each participant's strengths and weaknesses was provided by project staff and the Learning Resources Unit diagnostician, utilizing assessment instruments such as those listed in appendix A.

*See Glossary. Hereafter a word or phrase in small caps will indicate that that word or phrase may be found in the Glossary at the end of this handbook.

Objective 2

Objective 2 was to help LD women gain knowledge of their strengths and weaknesses through group and individual counseling activities.

Strategy

The program included two components that were designed to develop the self-awareness of the LD woman. Approximately one-half of the fall semester was devoted to a class entitled Human Potential Seminar. This seminar, designed by James D. McHolland, is a structured small-group experience that concentrates on positive feedback as a means of developing the individual's strengths, motivators, values, and goals. The reading level of this material was eighth grade; therefore, the leader of the seminar provided some oral reading to alleviate any embarrassment or difficulty that might result for any members of the class. The second component consisted of scheduling semimonthly, one-to-one contacts with a counselor who both augmented and continued the progress with self-awareness that was begun in the seminar.

Objective 3

The third objective was to help LD women develop strategies for accommodating learning differences and performance difficulties.

Strategy

The individualization of learning strategies was the most important objective for the LD woman. One of the errors that has been made in the education of the learning disabled is that educators have attempted to skip one or more of the basic steps necessary to the learning process. The process must begin with a physical VISUALIZATION of the skill to be performed. Some students are able to create valid mental visualizations, but often only with practice and experience. Once the visualization step has been mastered, it is equally important to teach the student to transfer the step-by-step process to other skills and concepts, ultimately determining her own strategies for coping with new skills and situations. To accommodate this learning process, the students enrolled in a developmental studies course for one college credit. The class was held in the Learning Resources lab, and each student received one-to-one instruction in academic skills from an LD specialist.

Objective 4

The fourth objective was to help LD women gain knowledge about the world of work and the demands of specific careers through contact with role models.

Strategy

Because of the aforementioned characteristic disillusionment, contact with role models can be a positive approach to enlightening the LD woman about the opportunities available to her both as a woman and as a handicapped adult. It was necessary to show program participants that their handicap was a barrier that could be, and had been, overcome by women in similar circumstances. While meeting and talking to role models was a positive aspect of the program, it was equally important for the LD woman to have a firm understanding of the daily problems with which these role models had to contend so that she could approach her career choice from a perspective firmly grounded in reality.

Objective 5

Objective 5 was to help LD women establish realistic goals for professional growth and career choices.

Strategy

This objective was a natural result of the combined self-awareness and role model aspects of the program. With full knowledge of her own capabilities and of the work world she would be entering, the LD woman would be able to determine a realistic approach to her own future. The counselor provided consistent guidance in the establishment of these goals.

Objective 6

To help LD women develop skills for obtaining and retaining jobs.

Strategy

A career development course, dealing with specific career information and job skills adapted to LD women, was offered at the beginning of the spring semester.

Once the student had established her realistic goals for career choice and development, she still had to develop her academic skills, as well as behavioral skills, so that she could present herself as a valuable asset to an employer. Though convincing an employer to invest in hiring an LD individual can be difficult, attempts to hide the disability can be self-defeating. During the career development course, the instructor taught the LD woman how to tell her prospective employer about her disability, defining the

disability where necessary. From her newfound perspective on her strengths and weaknesses, she could present herself realistically, pinpointing the skills she had difficulty performing but also describing her strategies for coping with those difficulties. It was important that she be able to specify exactly how she coped with her handicap to assure the employer that she or he was hiring an individual who would contribute positively to the company or institution. It was also important to be able to inform the prospective employer of the following potential assets of the LD woman, which are often overlooked.

- *Creativity*. Incorrect perception leads to a slightly different way of looking at the world. Inability to think in a linear way can lead to new solutions to problems. Experience at devising one's own coping strategies and covering mistakes can make the LD individual equally adept at correcting the mistakes of others.
- *Self-Discipline*. An invisible handicap must be overcome while receiving little praise. The inner strength that this accomplishment requires can be a valid selling point to an employer. These individuals have had to work much harder to get where they are, and they are not afraid to work hard to stay where they are.
- *Overcompensation*. Disadvantage can be turned to advantage. Some LD people overcome their disorganizational thought processes by becoming superorganized. (Brown 1980)

The burden of educating employers is on the handicapped individual, no matter what her or his handicap is. Thus, the LD woman who is attempting to find a job must be ready with specific answers as to how she will respond to particular situations in the job environment. She must show the interviewer that she knows her assets and her deficits and has discovered a way of coping with the latter. The job interview process of this project gave the LD woman the self-confidence to approach this most crucial aspect of launching a career.

Objective 7

Objective 7 was to share the Project Exploration process with other professionals working with high school and college LD women through the development and dissemination of a handbook and related resource materials.

Strategy

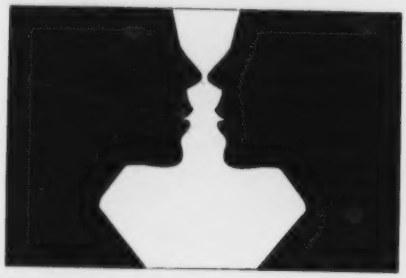
Presentations on Project Exploration were made at state and national conferences involving professionals who work with high school and college LD women. This Project Exploration handbook, as well as other project resource materials were developed and made available to interested professionals.

Description of Participants

The participants in Project Exploration were twenty-one adult women with various forms of learning disabilities. Five of the women were minority students. Several were older, returning students. Three had multiple handicapping conditions. Problems encountered ranged from academic suspension to a need for improved self-esteem. Four left the project early because of satisfactory academic progress; two transferred to other postsecondary institutions; and one of the older, returning students left the project because she obtained a full-time job, in keeping with her career goals.

In spite of the diversity of the participants, the common denominator of a learning disability unified them into a mutually supportive group.

Project Exploration



Theoretical Foundation: The Metacognitive Process

One of the stated objectives of Project Exploration was the enhancement of career-related and personal-growth skills of LD women enrolled in the University of Arkansas. Ultimately, twenty-one women college students of varied ages and backgrounds joined the program because of a desire to become more independent and be better problem solvers. It was an exploratory process, one that took form as the project progressed. Each woman brought a unique set of needs, values, and cognitive processes; therefore, programming for each was designed to accommodate those individual differences.

Each project participant was instructed in the use of metacognitive processes. As defined by J. H. Flavell (1979), metacognition is the knowledge of one's strengths and weaknesses and the ability to use that knowledge to analyze the best way to approach learning tasks. Simply put, it is the awareness of how one learns best, according to an individual cognitive map. It is a structured form of the problem-solving process that has high viability for the LD population. Because LD individuals process information differently, they must learn differently. The metacognitive process approach to learning helps them to understand the incongruencies caused by a learning disability.

Inherent in the definition of an LD woman is that she has average or above-average intelligence and yet has difficulty in organizing or expressing information unless it is presented in a way compatible with her particular learning patterns. If an LD woman is thoroughly aware of her cognitive strengths and weaknesses, she can make the necessary accommodations and choose effective strategies for completing learning tasks. Doing so enables her to be academically successful and to prepare for a career of her choice. This choice becomes hers; she gains an internal locus of control and is no longer dependent on others to make decisions for her.

Flavell (1979) has identified three basic components of the metacognitive process: (1) knowledge of one's thinking/learning processes, including knowledge of strengths and weaknesses; (2) ability to do task analysis, using the self-knowledge about strengths and weaknesses; and (3) ability to choose the most effective strategies for a specific situation.

Heretofore, metacognition had been studied in terms of memory and attending skills. In the LD literature, it had been discussed in terms of developing reading and socialization skills and, by the program director of Project Exploration, in mental health methodology. In Project Exploration, it also served as an instructional framework for facilitating the change process so necessary for growth. The theory, with its three components, was taught and utilized as a framework on which to build the subskills needed by each individual in her journey toward an internal locus of control. (The importance of the individualized approach cannot be overstated.) Differentiation is crucial for the LD population, for the following reasons:

- They obtain and process information differently, and so they must learn what works best for them in a specific situation.
- Because of a history of feeling "different" and discriminated against, they have a basic distrust of authoritarian approaches to learning.
- Because of their perceptual inaccuracies, LD persons tend to rely on others' "more correct" perceptions.
- Because most LD persons probably have a FIELD-DEPENDENT cognitive style, they need a frame of re-

ference to aid in organization and to use a more holistic thinking process. Metacognition can supply this framework.

Metacognition aids in clarifying the decision-making process. An LD person cannot solve all learning problems in the same way; what works one day may not work the next. Awareness of metacognition can alleviate the frustration inherent in that situation. Through metacognition, an LD person can become a self-monitor and can compensate within self rather than having to rely on an external monitor, such as a teacher or other authoritarian figure.

Methodology

The methodology for Project Exploration included a variety of formats adapted for the individual learning needs of each of the participants. Those that were the most successful for the majority included the following:

- Formal group-processing of such issues as attitude adjustment, strategies for effective decision making, and memory improvement skills.
- Informal group-processing of such issues as gaining a sense of belonging, socialization skills, team building skills, and positive ways of venting frustrations.
- One-on-one counseling by professionals in the areas of academic skills, time management, career opportunities, and test/observation feedback.
- Special group discussion of such issues as dyslogica, child abuse, visual imagery problems, medical/biochemical problems, and job-shadowing projects. These groups consisted of three to four women each.
- Over-the-phone service for one woman who, because of her dyslogic behaviors, disrupted the group whenever any visual stimuli were present. Two other women were served by phone because of their family situations and travel limitations.
- Total use of group processing (except for formal assessment) for some participants who had to verbalize problems as a prerequisite for understanding and remembering.

The very nature of the population from which the participants of Project Exploration were drawn mandated great flexibility and versatility in programming options. The following options were utilized: (a) the Human Potential Seminar, (b) exploring career options, (c) the self-help group concept, (d) compensatory memory aids, and (e) methods of presenting study aids.

The Human Potential Seminar

The Human Potential Seminar provided one basis for the search for real value in self. LD women historically lack positive self-regard; their perceptions of reality are not usually validated by those around them. Before they can achieve their full potential in education and/or career development, accommodations must be made to "the rest of the world" and to "self."

The Human Potential Seminar begins with a positive approach to self-development and moves through self-searching awareness to a denouement of setting long-range goals and objectives. The focus is no longer on just getting by but on hope for the future based on positive self-awareness.

Exploring Career Options

According to Weller and Buchanan (1983), it is difficult to estimate the number of LD adults in our society. In 1979, Travis estimated the LD adult population to be twenty million, using an incidence rate of 15 percent (cited in Weller and Buchanan 1983, 7). Evidence indicates that few LD adults make a successful transition into careers; problems that affect academic performance carry over into the world of work. According to Weller and Buchanan, "a major concern in preparing the learning disabled for adulthood and careers is the development of insights into their own learning and performance strengths and weaknesses" (1983, 7). This is another way of describing the metacognitive process approach used in Project Exploration.

The Career Assessment Inventories (CAI) (Weller and Buchanan 1983) were used in the project to help participants focus on their personal career goals and to provide them with an understanding of their particular strengths and deficits. Results of the CAI were helpful in assisting the participants to set realistic career goals. Another assessment instrument used in the project was the Attribute Inventory of the CAI, an inventory based on the theories of careers developed by John L. Holland (1973). (Because of the learning differences of the LD population, Holland's inventory is insufficient by itself.) The Attribute Inventory assesses the ability characteristics of LD

students in the following six categories:

Auditory areas:
1. Verbal understanding
2. Conversation

Visual areas:
3. Visual
4. Spatial

Motor areas:
5. Gross motor
6. Fine motor

The rating scale goes from 1 (very poor) to 6 (excellent).

The combination of Holland's six personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) with the LD characteristics makes the CAI a unique and effective instrument for career assessment of LD individuals.

Another set of instruments used in career planning and assessment was the Self-Exploration Inventories (Lee and Pulvino 1981). These inventories were used to assess attitudes, perceptions, and learning styles, as well as career goals.

The Self-Help Group Concept

Charlotte Johnson, program director for Project Exploration, was instrumental in the beginning of the self-help movement with the LD population. She initiated a group at the University of Arkansas and was invited to present a paper on the self-help group concept at the state conference of ACLD in Little Rock in 1980. The presentation helped to publicize the concept and to activate other such groups in the state.

Because there has been little research or publication about the LD adult population, the self-help group at the University of Arkansas designed and distributed a survey instrument to determine the needs and attitudes of the LD adult population. Eighty percent of those surveyed indicated that the most effective source of support for LD adults were other LD adults (Johnson 1980).

The use of the group process in Project Exploration was a natural outgrowth of the expertise of the program director and the success of the process with other groups. The self-help group process is reminiscent of Plato's "Allegory of the Cave," in which prisoners are chained in a cave facing the back wall. All they can see are shadows of the world outside reflected from a fire in the mouth of the cave. Finally, one prisoner breaks free and crawls into the brilliant sunlight of reality, finding it almost blinding. Gradually, the ex-prisoner grows accustomed to the light and hesitates to go back into the cave; however, the desire to free the others overcomes the hesitation and the freed prisoner returns to the cave to bring others into the light of reality. So it is with the members of LD self-help groups—they shed light on the problems and issues of the LD adult by facing the reality of their learning differences and helping others to do the same. Some want to leave the group when they have "seen the sunlight," but most remain to free others from the chains imposed by a learning disability.

In experimenting with new concepts, the group process proved more effective than individualized processes because everyone was involved and no one felt isolated and at risk. In an individualized, classroomlike situation, the women too often felt they were back in a traditional resource room environment tainted by past failures; they did not feel free to experiment and try new strategies. Resistance to change, in fact, is one of the great barriers to learning metacognitive techniques. Learning to change, in itself, was a *big* change for most of the participants of Project Exploration.

Metacognition provided a good theoretical basis for the participants because it helped them become aware of the need for change from within, rather than having it imposed on them from without. This is another example of gaining internal locus of control as opposed to being dependent on an external locus of control. Some of the women, however, were not ready for change (those with less severe disabilities were more flexible than the others). Because women with learning disabilities are under great stress in learning situations, they have little energy to search for alternatives. Just getting through college is a struggle for survival.

Compensatory Memory Aids

In presenting compensatory information, it was essential to prepare the LD participants for flexibility—a willingness to change and to try new ways of learning. They must be prepared to hear "something different."

Charlotte Johnson, program director, presented the concept of "trying smarter, not harder" to become a better memorizer. She suggested that participants "try smarter" by experimenting with many memory aids to find out what worked best for them. She urged them not to rely on only one method but to try auditory, visual, and tactile methods—all three or any combination thereof. The traditional mnemonic devices of acronyms as well as nontraditional

memory methods were also encouraged. Johnson presented one example of an aid that had helped her on exams. She would place her textbook on the floor by her desk during a test and visualize the information in the book; she could usually then call up the appropriate pages from memory. Johnson felt she was stronger on visual memory aids because she herself is a visual learner. For example, she would use a picture of a bar of "pure Ivory soap" to call up the memory of the "puritans" in American history. Other aids to memorization that were taught included acronyms, outlines of main ideas and concepts, and additional forms of structuring information so that it could be absorbed one way or another. The primary objective was to convince the LD women to take charge of their own learning destinies and not let others "jerk their chains" so often.

Auditory compensation methods such as SUBVOCALIZATION, rewording, and rhyming sound associations were also taught. Tactile methods—such as rewriting, in addition to rereading, notes prior to tests—were also encouraged. In general, the students were taught to use multiple "hooks" to increase recall efficiency and effectiveness.

It is important not only to learn *how* to "memorize smarter" but also to learn *what* information to memorize. LD people often try to put everything, even irrelevant information, to memory, which causes brain overload and extreme frustration. They must learn to look and listen for main ideas and concepts—things mentioned both in class and in the text. They should listen for clues, such as in instructor's repeating or becoming excited about something or reviewing it in some way. They should also note chapter headings and main chapter concepts and be able to summarize main concepts. A recurrent problem of LD individuals is not knowing what to pay attention to. They have difficulty seeing relationships between chapters, sections, or lectures. They must learn to hook ideas onto generalizations, to reorganize their notes, to outline, to try many strategies—to devise a system that works for *them*. They cannot afford to settle for less. In order to know how to memorize, an LD woman must know (1) the strengths and weaknesses of her own learning style, (2) a variety of techniques for memorizing, and (3) something about the way her brain works—some "brain theory."

In order to transfer information from SHORT-TERM MEMORY, where it will be lost quickly under stress, into LONG-TERM MEMORY, short but frequent exposure to the materials to be learned is essential. It will be more apt to stay in long-term memory once there. Short-term memory relies on electrical impulses and is what one gets through "cramming." Long-term memory relies on chemical impulses and has much more longevity. Only limited amounts of information can be transferred from short-term to long-term memory at a time; therefore, it is necessary to study for short, frequent periods. Another trick for memorizing is to read information just prior to going to bed so that the brain can consolidate it during sleep. SUPERLEARNING, a method similar to the Berlitz method of teaching foreign languages, is another good strategy for LD people. It emphasizes self-learning, a very important concept.

LD people often fail to recognize their own best strategies. They do not consider even the simplest alternatives, such as going into a quiet room to avoid distractions. They must *learn* to seek out their best learning environments. For some, that means complete quiet and isolation; for others, environmental records of sea and nature sounds can help in concentration. Project Exploration participants were provided with information from the LD literature on how such things as the weather, rug designs, and fluorescent lighting can affect their ability to concentrate and learn. The most valuable information on this subject, however, came from other LD adults who had personal experience with such phenomena as weather-related headaches and distractions caused by lighting in a classroom. Again, metacognition proved extremely useful because it prompted the women to become introspective and aware of what was "jerking their chains" *this* time.

Methods of Presenting Study Skills

After participants had reached a certain level of self-awareness, they were introduced to specific examples of systems or strategies for studying "smarter, not harder." The systems are combinations of traditional study skills and specific LD study skills designed for the LD student.

Underlining

It is as important to *underline* the right information as it is to *memorize* the right information. The LD student should use a pen to "do something" to the materials being studied. First, the most significant concepts and ideas should be underlined; then they should be coded so that it is easy to return for a test review without having to reread everything. Also, it is a good idea to double-check to make certain that what is underlined is a true representation of the gist of the material. It is important to get the overall picture before concentrating on specifics.

Because the attention deficit disorders of LD students make them easily distractible, underlining can become a useful guide to finding the place when the train of thought needs to be picked up again after a distraction. It serves as still another strategy for simplifying material to be learned.

Recognizing and Retaining the Main Idea

The LD student must learn to recognize the location of the main idea in a paragraph. Often, an author will consistently place the main idea in the same location in all paragraphs. Most often the main idea will be expressed in the first few sentences and restated at the end. Awareness of printer's clues, such as italic or boldface subheadings, is important for the LD student. Too often such clues are overlooked.

When approaching a new reading, the LD student should first skim it in its entirety before reading for detail. She or he should look at subheadings, pictures, diagrams, charts, and so on, and, in order to synthesize, should self-question with such questions as "How does this information relate to previous chapters or lectures? to future chapters or lectures? to me personally?" It is important to establish connections between what may seem like isolated, unrelated pieces of information and to get actively involved with material to be learned. Learning must be a two-way interaction, with the learner being mentally prepared to "switch gears" when necessary. A coding system helps to synthesize material into a more compact form. Other methods of recognizing and retaining the main ideas are as follows:

- Reword what seems to be the main idea.
- Highlight the main idea.
- Draw a line in the margin by the main idea.
- Try to get all related information on the same page, even if it means writing some of it on the bottom of the page or in the margins.
- Number the important concepts.
- List the most important ideas or concepts.
- Note behavioral objectives, if they are stated.

To overcome the resistance of some students to writing in texts, they should be encouraged to buy used books that are already partially underlined.

Strategies for Note-Taking

Project Exploration participants were taught to apply some of the strategies for outlining to note-taking. Examples are as follows:

- When taking notes, skip lines and spaces to fill in later when in doubt about lecture or written material.
- Draw a line down the center of a piece of paper; take notes on one half and write the main ideas on the blank half later.
- Picture-code the concepts rather than write them. This is a holistic, right-brain approach.
- For some, it is best to leave much space; others learn better when material is condensed. Again, it is largely a matter of knowing one's best learning methods.
- Immediately after a lecture, take five or ten minutes to underline, in a particular color, the main ideas or the impression of the main ideas of that day's lecture. Fill in information not written down during class.
- If necessary, rewrite notes for readability.
- Just prior to a test, underline the important ideas in a second color for reinforcement.
- Just prior to a final exam, underline, in a third color, those ideas which seem most significant at that time. With each change in underlining color, the ideas should become more generalized. The color code makes this process more visible.
- Review notes aloud, preferably in a study group; if none is available, read aloud to yourself.
- Use mnemonic devices, visualization, acronyms, and any other aids that will help to organize information into manageable pieces.

The *Guide to Teaching Study Skills and Motivation* (Bragstad and Stumpf 1982) was used as a sourcebook by the staff of Project Exploration. It contains models for note-taking, coding systems, and marking systems, and it illustrates how different contexts or contents may be coded in various ways. An example would be to put a square around the thesis statement of an essay or to rewrite it in the margin.

Students were asked to circle new vocabulary words or to write them in a special section of their notebooks. The actual texts used in their university academic work were employed as teaching tools as much as possible; this served to reinforce content while teaching students how to study at the same time.

Metacognition and Study Skills

Metacognition is knowing when knowledge ends and ignorance begins; it is distinguishing between what is retrievable from the brain and what is not there to be retrieved. It separates the relevant from the irrelevant. It is knowing how best to use energy to maximize learning effort without "burning out." Many LD individuals do not perceive when they have studied enough; use of metacognition gives them more perception about the extent of study time necessary for them as individuals and is a valuable aid for time management.

The staff of Project Exploration approached problem solving in a pragmatic way. The students were given realistic opportunities for problem solving, rather than just theory.

The women students of Project Exploration were

surprised to learn that theory indicates the existence of different learning styles based on gender. At the risk of oversimplification, men seem to be more left-brain oriented while woman are more right-brain oriented. The functions of the left side of the brain tend to be those of logic and analytical reason—crucial skills for writers, mathematicians, and scientists. The right side tends to be associated with intuition and holistic perception—crucial for artists, craftspeople, and musicians. Research indicates that on the whole, the LD population tends to be more right-brain oriented.

Another source used for problem-solving skills was *Problem Solving and Comprehension: A Short Course of Analytical Reason* by Arthur Whimby and Jack Lochhead (1981). Whimby's problem-solving method is as follows:

> For each problem one student takes on the role of problem solver and the other the role of listener. The problem solver's role is to read the problem aloud and to continue talking throughout the entire solution process. The listener's role is to keep the problem solver talking and to continually probe for more detailed descriptions of even the most trivial steps. These are most often the most difficult to explain, since they have become automatic and were probably learned when we were too young to grasp their meaning. The listener must *not* solve the problem or give hints to the problem solver; his function is solely to demand greater clarity. (Lochhead 1982)

Project Exploration was itself an innovative approach to the problem of providing assistance with career development for LD women. Some programs hope to enhance employability through attacking academic skills; some focus on vocational education. This pilot program was a comprehensive approach, focusing on enlightened self-awareness as well as the development of academic and behavioral skills. This program broadened and clarified the accommodations set forth in Section 504 of the Rehabilitation Act of 1973 (Cordoni et al. 1982). Its objectives go beyond the sphere of most disabled student services programs, which are geared to those with more visible handicaps. The ultimate goal of the program was to send the LD woman into the work world with firmly established goals that were not dependent on a single situation but instead could be transferred and adapted to new and changing situations. Based on a review of extant programs, this pilot program was the first of its kind in actually implementing a comprehensive career development process for LD women.

Suggestions for Replication

Projects based on the Project Exploration model should be replicated for other LD populations. In fact, such replication has already occurred. Project Opportunity, also funded by the Women's Educational Equity Act Program, gives disabled high school girls in Arkansas a chance to obtain higher education through academic and career skills training. A Job Training Partnership Act grant program, modeled after Project Exploration, was funded in January 1984 to enhance career opportunities for disabled and disadvantaged youth in northwest Arkansas through basic skills improvement and job placement.

Recommendations for Future Projects

- Replication of Project Exploration for LD females in high school
- Replication of Project Exploration for LD adults—both male and female—in college
- Continuation of Project Exploration at the University of Arkansas, sponsored by the university's Student Development Center and the Disabled Student Resource Center
- A more extensive "how-to" book for teaching LD adults based on current theory and practice

Appendix A

Assessment Materials Used by Project Exploration

This appendix includes the forms that were used by Project Exploration as methods of assessment. Additional tools used in assessment included the following sources, which are listed in the Bibliography: Weller and Buchanan, *Career Assessment Inventories for the Learning Disabled;* Lee and Pulvino, *Self-Exploration Inventories,* and the *Woodcock-Johnson Psycho-Educational Battery: Teaching Resources.*

Process Record

For: _____

1. **INTAKE**
   ACT_____ Contacts _____ Interviews_____ Contract _____
   LSA _____ Essay_____

2. **EDUCATIONAL ASSESSMENT**
   Reading—WRAT_____ Other_____
   Informal Dyslexia _____ Visual track _____
   Auditory Discrimination_____ Phonics _____
   Visual Perception_____
   Neurological Screening _____
   Cognitive-Learning Style
   Canfield _____ Mode_____
   Barsch Mode _____ Other_____
   Bicognitive _____ Other _____
   K-ABC _____ Other _____
   Johnson-Woodcock Psychologial Educational Battery
   Broad Cognitive Ability Cluster_____
   Circled are given 1 2 3 4 5 6 7 8 9 10 11 12
   Verbal Ability_____ Differential_____
   Reasoning _____ Differential_____
   Perceptual Speed_____ Differential_____
   Memory_____ Differential_____
   Reading Aptitude_____ Differential_____
   Math Aptitude _____ Differential_____
   Written Language Aptitude_____ Differential_____
   Knowledge Aptitude_____ Differential_____
   Achievement Given 13 14 15 16 17 18 19 20 21 22
   Reading_____ Differential_____ Math_____ Differential _____
   Writing Language_____ Differential _____ Human _____ Differential _____
   Interest Given 13 14 15 16 17 18 19 20 21 22 School _____
   Nonschool _____
   Other_____

3. To Career Counselor: Problem _____ Counseling_____ Test _____
4. To Lab Instructor: Math _____ English_____ Memory_____
5. Groups:_____
6. Signed up: 1071 Lab _____ 1041 Human Potential Seminar _____ 1051 Career Dev._____
7. Other referrals_____

Needs Checklist

Rate your needs by circling 1 (very important), 2 (important), or 3 (not so important).

1 2 3 **Job Training**

1 2 3 On-the-job training
1 2 3 Job choice—what career to choose (job awareness)
1 2 3 Schooling—GED (high school equivalency)
1 2 3 Schooling—vocational-technical training
1 2 3 Schooling—licensing or certification
1 2 3 Schooling—college
1 2 3 Knowing which of your strengths and weaknesses to use or avoid in a job

1 2 3 **Job Getting**

1 2 3 Interviewing skills
1 2 3 Knowing why you're being turned down for jobs
1 2 3 Knowing what the job requirements are
1 2 3 Résumé writing
1 2 3 How to fill out application forms
1 2 3 How to search for a job, where to find jobs, and what jobs are available
1 2 3 Getting through required testing for job qualifications
1 2 3 Getting through red tape and strategy
1 2 3 How to change careers or jobs

1 2 3 **Moving to a Better Job for My Talents and Situations**

1 2 3 Getting my "foot in the door" to some company or agency
1 2 3 A chance to prove my abilities and loyalty
1 2 3 A place where I can work my way up—not a dead-end job
1 2 3 A job without writing or record-keeping demands on me
1 2 3 A job that does not require reading
1 2 3 A quieter environment
1 2 3 A job with a chance to move around; not being tied to a desk or workstation
1 2 3 A job with a variety of tasks or duties
1 2 3 A well-organized job, predictable and consistent
1 2 3 A job in which I can work at my own pace
1 2 3 A job in which I can self-adjust the tasks I do (in case of a bad day, a need to leave early, etc.)
1 2 3 A structured job in which someone else tells me what to do
1 2 3 A job with more opportunity to talk or specialize with people
1 2 3 A job in which I work alone most of the time
1 2 3 A job that allows cooperation with other workers—teamwork
1 2 3 A job in which I am boss over other people
1 2 3 A job in which I can use my social and persuasion skills
1 2 3 A job in which co-workers are easy to get along with
1 2 3 A job with incentives, rewards, and "strokes"—people saying I am doing well
1 2 3 A boss who shows appreciation for my work; a fair boss
1 2 3 A job with travel
1 2 3 A job without travel
1 2 3 An outside job
1 2 3 An inside job
1 2 3 A job with responsibility and freedom to make decisions
1 2 3 A job environment that allows me to avoid allergies

1 2 3 A job away from movement or line sickness (such as working on conveyer belts or with fast-paced machinery)
1 2 3 A job more consistent with my children's school hours
1 2 3 A job with convenient location and hours for preschool
1 2 3 A job closer to home
1 2 3 A job with other transportation available, such as car pools and public transit
1 2 3 A job that I already have the proper clothes for
1 2 3 A part-time job
1 2 3 A full-time job
1 2 3 A summer job only
1 2 3 The summer off for care of children and travel
1 2 3 A job with lots of overtime opportunity
1 2 3 A job not requiring (or subtly pressuring) me for overtime
1 2 3 A job so that I can support myself only
1 2 3 A job so that I can support a family as sole provider
1 2 3 A job to supplement the income of other wage earners
1 2 3 Experience in my field of study to see if I like it

1 2 3 **Improving My Skills in Order to Become a Better Person and Employee**

1 2 3 Better reading skills
1 2 3 Better math skills
1 2 3 Better speaking skills
1 2 3 Better writing and composing skills
1 2 3 Better spelling skills
1 2 3 Build my vocabulary
1 2 3 Better memory
1 2 3 Better concentration
1 2 3 Test-taking skills
1 2 3 Following directions
1 2 3 Gain more technical know-how
1 2 3 Gain more information; learn more
1 2 3 Help in how to choose and reach goals
1 2 3 Better thinking skills
1 2 3 Better skills to manage people
1 2 3 Better skills to manage tasks and time
1 2 3 Better skills to manage a business or organization
1 2 3 Better secretarial skills; typing
1 2 3 Better bookkeeping and record-keeping skills

My biggest problem is_____

_____

_____

_____

_____

Advisor-Student Activity Agreement

I agree to participate in the following specified activities as negotiated between my advisor and me.

_____ Mentor _____

_____ Counseling Unit _____

_____ Career Planning and Placement _____

_____ Classroom Instructor _____

_____ Advisor _____

_____ Tutoring _____

_____ Learning Lab _____

_____ Special Services _____

_____ Dean's Office _____

_____ Academic Advisor _____

_____ Basic Skills _____

_____ Other _____

Advisor comments:

Student comments:

Student signature _____ Date _____

Advisor signature _____ Date _____

Project Exploration Activity Agreement

By_____ Beginning date: _____
With_____ Completion date:_____

Overall objective: For the participant to be able to describe, in any form, her realistic career objectives and her plan of action.

Participant agrees to complete the following: Date:

_____ Strong Campbell Interest Inventory
Career Planning and Placement
Counseling Unit
_____

_____ Strength Card Sort
_____

_____ Self-Directed Search
Career Planning and Placement
Counseling Unit
_____

_____ Career Planning Questionnaire
_____

_____ Career Library Search
Career Planning and Placement
_____

_____ Career Counseling
1. _____
2. _____
3. _____
4. _____

Optional

_____ Human Potential Seminar—1 credit hour
_____ System of Interactive Guidance Information—
Career Planning and Placement
_____ Referral to Counseling
Counseling Unit
Mental Health Unit
_____

Other: _____

1. The participant will be able to list at least three **interest areas.**
2. The participant will be able to list at least ten of her own **strengths.**
3. The participant will be able to sort and rank a given list of **values.**
4. The participant will be able to list and describe three **possible careers.**
5. The participant will be able to describe a **strategy** to reach one career.

Signature of participant _____

Student Participation Summary

Student's Name _____

ID Number _____

Learning Resource Unit Code _____

ACT Scores E _____ M _____ SS _____ NS _____ C _____
HS GPA UA CUM

Rural _____ Urban _____ Minority/Ethnic _____ Returning Student _____ Other _____

Demonstrated need for services: Educational _____ Cultural _____

Qualified on the basis of need and the following:

Low Income _____ First Generation Immigrant _____ Handicapped _____ Other _____

Academic Year or Term
Type of Services or Extent of Involvement

_____

_____

_____

Exit Interview Summary

Reason for Leaving Project (check any that apply):

_____ Satisfactory Academic Progress (services no longer required)
_____ Transferred to Another University or College
_____ Graduated
_____ Insufficient Financial Aid
_____ Entered Armed Forces
_____ Health
_____ Death
_____ Academic Suspension
_____ Academic Dismissal
_____ Continued Participation Unprofitable
_____ Personal Reasons

Other _____

_____

Comments: _____

Exit interviewer _____ Date _____

Appendix B

List of Media Resources for LD Adults and Adolescents

As much information as possible has been provided for each item in the following list. For additional information please contact the organization listed.

Infomedix

The following audiocassette tapes may be ordered from:

Infomedix
Educational Resources & Services
12800 Garden Grove Blvd., Suite E
Garden Grove, CA 92643
(714) 530-3454

Diagnosis: A First Step in Developing Academic Skills; Brigance et al. *T8.* $7.00.

Sexuality for LD Adults; Volk, Wood. *T9.* $7.00.

Identifying the Disabilities of Young Adults; Cordoni, Freiburger, Hackett. *T55.* $7.00.

Ideas for Better Mental Health Services; Johnson. *T57.* $7.00.

Metamemory Development in Learning Disabled Children; Trepanier, Casale. *T58.* $7.00.

Implementing a LD College Program; Cordoni. *F43.* $7.00.

Cognitive Strategy; Sprague, Papazian. *F47.* $7.00.

Initiating, Developing, and Maintaining a College LD Program; Richardson, Becton, Chandler, Ottinger, Matuskey, Webb. *F48. $7.00.*

Arkansas Association for Children with Learning Disabilities

The following films are available through the Arkansas Association for Children with Learning Disabilities (AACLD). The AACLD offers the following films free to association members on a short-term loan basis. Nonmembers are charged a $10.00 fee, which is used for maintenance and replacement of the film library. Requests for films should be made to:

AACLD
P.O. Box 7316
Little Rock, AR 72217
(501) 666-8777

Program 1. *Nature and Characteristics of the Learning Disabled Adult* (2 reels). "We Knew Something Was Wrong, but We Didn't Know What to Call It." Length: 1 hour.

Program 2. *Diagnosis*. Presents the "London Procedure," a screening, diagnostic, and teaching guide. Diagnostic tests are demonstrated with an LD adult, providing dramatic insights into the sensor-processing problems of LD adults. Length: 45 minutes.

Program 3. *Some Remediation Strategies* (2 reels). Multisensory teaching techniques are demonstrated, and a method of empirical cognitive-mapping gives insights into adult students' preferred learning styles. Length: 50 minutes.

The Reluctant Delinquent. This film reveals the despair of a seventeen-year-old boy after twelve years of failure in school. He is paroled to attend a special school for students with learning disabilities. The help he gets results in learning. Length: 24 minutes.

If a Boy Can't Learn. This "first" in the field focuses on a seventeen-year-old cowboy who has a learning disability. A nonreader, he has passed along through school and entered high school without graduating from elementary school. He has a behavior problem as well as posing a teaching challenge. A diagnostic work-up and evaluation enable his teachers to improvise ways of using the boy's best channels of learning to compensate for his disabilities. Length: 29 minutes.

Adolescence and Learning Disabilities. This film is structured around four "classic tasks" of adolescence: developing self-esteem, achieving sexual identity, establishing long-range goals, and meeting society's demands. It shows in personal terms what effect a learning disability has on a teenager and what a teacher can do to help students cope with or overcome learning disabilities.

Lawren Productions

The following films are available from:

Lawren Productions, Inc.
P.O. Box 666
Mendocino, CA 95460
(707) 937-0536

Strengths and Weaknesses: College Students with Learning Disabilities. Message: Success in college is possible for LD students. Audience: High schools, colleges; adults; faculty and administrators at both high school and college levels; students with and without learning disabilities; parents; advocates; general audiences. Produced by the Iowa State University Research Foundation, Inc., and its Film Production Unit, in collaboration with the Iowa Association for Children and Adults with Learning Disabilities.

> *I use this film to raise the consciousness of students with learning disabilities and of the professionals who work with them.*
>
> —Dee Wright, Iowa State University

Whatever Happened to Mike? Sequel to *If a Boy Can't Learn*, in which six years after graduation from high school, Mike is doing well.

Adolescence and Learning Disabilities. Strategies for helping the learning disabled meet the tasks of adolescence.

National Symposium for Learning Disabilities

The following 3/4-inch videocassette tapes are available from:

National Symposium for Learning Disabilities
600 Southland Financial Center
4111 S. Darlington
Tulsa, OK 74114

The series is entitled *The Dilemma of the LD Adult*. Individual videocassette tapes include the following:

Help: The Learning Disabled Adult. A 57-minute color videocassette prepared for and geared to the interests of the general public. The format of the tape includes an initial focus on the dilemma of the LD adult; a statement

of the problem; interviews with LD adults; an assessment of their difficulties; educational implications and instructional strategies; and a realistic look at their future as to higher education, vocational training, and job opportunities versus mental hospitalization, penal systems, and unemployment. This tape focuses on the alternative of success versus failure.

Employing the Learning Disabled Adult. This 30-minute color videocassette features the life story of a young adult in his quest for success. Its purposes are to acquaint business and labor organizations with the problems of adults in finding and holding jobs; to suggest alternative ways to enable these individuals to be successfully employed; to explore ways for them to train for various vocations; and to involve labor unions and businesses in finding solutions to tap this great human resource that so often goes to waste.

Educating the Learning Disabled Adult. This 30-minute color videocassette explores the educational and vocational needs of the LD individual. Its purposes are to acquaint educators (secondary, postsecondary, and vocational) with the problems of the learning disabled in securing an education that will enable them to be successful young adults; to introduce viewers to the unique learning styles of these individuals; and to offer some alternatives in helping LD people to secure an appropriate educational program. It features interviews with nationally know authorities and LD adults and portrays model vocational and higher education training programs.

Through the Cracks: Rehabilitating the Learning Disabled Adult. This 30-minute color videocassette vividly portrays the dilemma of LD people as they encounter the mental health and judicial systems. It features interviews with LD young people who have been caught in this web; portrays model programs that have been successful in rehabilitating these individuals; and explores with mental health and judicial personnel some of the alternatives to failure.

Appendix C

Planning Events for LD Adults: A "Know-How" Checklist

Prevent the following situations:

1. Overwhelming people with too much stimuli such as noise, visual stimuli, and other distractions
2. Demanding too much of the wrong things from people with LD
   - Money
   - Energy needed to cope with school or work. Neurological problems often associated with LD must be compensated for by extra effort
   - Academic skills such as reading, writing, and listening for long periods of time. This is unrealistic for many LD people
   - Polished etiquette
   - "Fitting in" to society's expectations
   - Owning/driving a car
   - Ability to interpret nuances of language and nonverbal communication
   - Ability to keep times, dates, and schedules straight

Provide the following conditions and aid:

1. Predictability
   - Structure of schedule
   - Consistency in time and place
   - Information provided ahead of time so that the LD person can prepare and organize
   - Time to rehearse
   - Specific directions given in several modes (e.g., verbally, visually, and tactilely)
   - Weather conditions, if travel is necessary, so that necessary adjustments can be made
2. Processing aids
   - Honest feedback
   - Extra time for mental processing and expression of thoughts
   - Freedom of movement
   - "Time-outs" and rest periods
   - Information presented through several modes and types of activities
   - Aids to help people "switch gears," such as handouts, repetition, and memory aids
   - Telephone calls to remind LD individuals prior to an event

Build up an LD person's self-esteem with the following activities:

1. Use social events to help LD individuals develop companionship and support systems
2. Encourage interaction with both LD and non-LD people
3. Use food to bring people together
4. Use rewards, recognition, job titles, and buttons as identifiers
5. Provide activities so that there is something at which everyone can excel

Use the following resources for a successful support system:

1. A positive attitude
2. Realistic expectations, good public relations with the community, positive publicity, and a strong belief system that says LD is okay

Appendix D

How to Use Audiotaped Texts for LD Students

Method 1: The Neurological Impress Method (the painless way to learn to read better)

You will be able to:

- Teach your eyes where to look for meaning from print
- Get content you need for tests and understanding
- Do a prereading exercise like survey, question, read, reflect, and reread, so that you can predict major topics and get your mind involved and ready

How to do it right: With text, read and listen to the content at the same time, in synchroneity.

- You may follow using fingers, pen, card, etc.
- You may move lips, vocalize words, or use any crutch. (Don't worry about what elementary schoolteachers have told you; these are sound learning principles and compensations that *you need.*)
- You may change the speed of the player so that it is faster or slower and you can vary the speed from day to day, based on your intuitive feelings.
- Use tapes at least two hours each day, barring acts of God. Use them all summer long and on vacations. Find texts you will need long before classes begin, and get ahead. Never get behind in classes.
- Take breaks often, but keep them short. Mentally review the content for that section. Some people need to break every ten minutes to keep attention focused. Try to break only every twenty minutes or at a change of topic; however, use your own judgment.
  - —At each break or topic change, write out key words, concepts, and terms with definitions.
  - —If writing is difficult, tape your summary. This is your record for studying or reviewing for tests. It is impossible to relisten to or reread the entire book.
  - —Ideally, listen to the book sections to be covered in a class immediately prior to that class.

When ready for a challenge do a prereading system:

Step 1: Just listen to the tape.
Step 2: Then read the text.
OR
Step 1: Read the text first.
Step 2: Then listen to the tape and read text at the same time.

Method 2: Superlearning Technique (tapping your subconscious potential)

Before going to sleep:

Step 1: Lie down and get in a relaxed state. You may use the tense-relax exercises, self-hypnosis tapes, or your own methods. Your body should feel either light and floating or heavy and peaceful.
Step 2: Play the tape of the text as you are dozing off to sleep. A few hours later, wake up and summarize the tape, from memory as much as possible. Then replay the tape as a check.
Step 3: Make a complete summary of the tape.

Remember: Use the suggested techniques that are consistent with the way your brain works!

Glossary

FIELD DEPENDENT. The tendency to respond to a whole rather than to selected parts. In general, the learning disabled tend to be more field dependent—that is, unable to distinguish the parts from the whole—than the nondisabled.

FIELD INDEPENDENT. The ability of the individual to attend to relevant stimuli while ignoring the irrelevant. LD individuals often lack this ability.

HEURISTIC. That which serves to guide, discover, or reveal. Heuristic elements and ideas are valuable for empirical research but cannot be proven.

LATERAL THINKING. The act of looking from many different angles at a problem to be solved but not being stuck with a rigid or single-minded view (as defined by E. DeBono, *New Think: The Use of Lateral Thinking in the Generation of New Ideas* [New York: Basic Books, 1968]).

LONG-TERM MEMORY. Memory from which information can be recalled after a rather long period of time following memorization.

SHORT-TERM MEMORY. Memory from which information can be recalled for only a short time after memorization.

SPECIFIC LEARNING DISABILITY. A disorder in one or more of the basic psychological processes involved in understanding or using language (spoken or written). It may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. These disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The phrase *specific learning disability* does not refer to the learning problems of children that are primarily the result of visual, hearing, or motor handicaps; of mental retardation, or of environmental, cultural, or economic disadvantages.

SUPERLEARNING. The act of accelerating learning, unlocking potential, and turning it into superior performance.

SUBVOCALIZATION. A method of mentally processing thoughts prior to verbalizing them.

VISUALIZATION. The ability to "see" something, such as a list or picture, even when it is no longer physically present.

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